

**What Is Claimed Is:**

1. A method for padding segments for transmitting data on a bus system, the segments having a preset total number of binary information pieces, in particular bytes, and the data being transmitted in the segments, in the event of transmission of data including less binary information, bytes in particular, than the predetermined total number of the segment, the missing binary information, bytes in particular, of the data being padded to the total number of the segment by a filling pattern of a corresponding number of binary information pieces, bytes in particular, wherein a filling pattern, whose number of binary information pieces, bytes in particular, corresponds to the total number of the segment, is first written into the segment; and the binary information, bytes in particular, of the data is subsequently written into the same segment, the particular binary information, bytes in particular, of the filling pattern being overwritten by the binary information, bytes in particular, of the data.
2. The method as recited in Claim 1, wherein the binary information, bytes in particular, of the filling pattern and the binary information, bytes in particular, of the data are written in a buffer memory into the segment, and this segment is transmitted from the buffer memory to the bus system.
3. The method as recited in Claim 1, wherein the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.
4. A device for padding segments for transmitting data on a bus system, the segments having a predetermined total number of binary information pieces, bytes in particular, and first means being contained that transmit the data in the segments, second means being contained that, in the event of transmission of data including less binary information, bytes in particular, than the predetermined total number of the segment, pads the missing binary information, bytes in particular, of the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces, bytes in particular, wherein the second means first writes a filling pattern, whose number of binary information pieces, bytes in particular, corresponds to the total number of the segment, into the segment

and subsequently writes the binary information, bytes in particular, of the data into the same segment, the particular binary information, bytes in particular, of the filling pattern being overwritten by the binary information, bytes in particular, of the data.

5. A bus system having a device for padding segments for transmitting data on the bus system, the segments having a predetermined total number of binary information pieces, bytes in particular, and first means being contained that transmit the data in the segments, second means being contained that, in the event of transmission of data including less binary information, bytes in particular, than the predetermined total number of the segment, pads the missing binary information, bytes in particular, of the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces, bytes in particular,

wherein the second means first writes a filling pattern, whose number of binary information pieces, bytes in particular, corresponds to the total number of the segment, into the segment and subsequently writes the binary information, bytes in particular, of the data into the same segment, the particular binary information, bytes in particular, of the filling pattern being overwritten by the binary information, bytes in particular, of the data.